

Application No. 09/052325
Reply to Office Action of November 30, 2005

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AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning on page 11, line 21 with the following amended paragraph:

Data storage system 14 includes multiple arrays of disk devices 28 (which are also shown in FIG. 3) and a system memory 22. The portion of the system memory implements cache memory 24. The multiple arrays of disk devices 28 provides a non-volatile storage area and cache memory 26 provides a volatile storage area. Each disk device 28 includes a head disk assembly, a microprocessor, and a data buffer which enables the data storage system 14 to provide for the parallel processing of data. In the described embodiment, system memory 20 is implemented by a high-speed random access semi-conductor memory. Within cache memory 24 there is a cache index directory 26 which provides an indication of what data is stored in cache memory 24 and the address of that data in cache memory 24. Cache index directory 26 is organized as a hierarchy of tables for devices, cylinders and tracks, and data records as further described in U.S. Patent number 5,206,939 issued April 27, 1993, and incorporated herein by reference.

Please replace the paragraph beginning on page 18, line 21 with the following amended paragraph:

Now turning to column 110, the actions of the client process are shown. Since the server process has indicated its readiness to accept a connection at step 86, the client process wants to accept the socket. Beginning at steps 112, and continued through step steps 114, 116 and 118, the client process begins to respond to the connection request put out by the server process.

Please replace the paragraph beginning on page 20, line 3 with the following amended paragraph:

It should be noted that, once the client process sends the file descriptor to the server process at step 122, the client process falls into a loop. The client process is then ready to accept another connection. Once the server process receives the file descriptor, it creates another socket on

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the same WKP. The numbers contained with the socket are simply to indicate different sockets. The other socket is created at step 94. As previously shown, the socket is followed by bind and connect commands at steps 96 and 98 respectively. The client accepts the connect at step 98 at step 124. It should be noted that all of this is done on the WKP. Once the client process has accepted the connection request at step 124, the server process sends to the client process, at step 100, the file descriptor, which is received by the client process at step 126. Step 100 allows the server to send the file descriptor to the client to let the client know it is in connection with the same server process. The second of the two connections the client process has been told by the configuration file that it is going to receive is now completed. Because two connections have been made, the server process and the client process in essence have two separate channels for use in communication with each other. Typically, one of the communication channels is used for data communications, while the second is used for error communication.

Please replace the paragraph beginning on page 21, line 4 with the following amended paragraph:

The process begins rather similarly to the one described in 4, except for the fact that the configuration file has instructed the server process to begin the socket creation not on the WKP, but on the WKP plus one. Thus the socket creation beginning at step 132 is on a different WKP. At steps 132, 134, and 136 the socket is created, bound, and indicates its readiness for connection on the WKP plus one. The client process then creates its own socket at steps 152, 154, 156 and 158. At step 158, the socket created on the WKP plus one is accepted. Once the server process is aware that the client process has accepted the process it issues a send command at step 138. The message sent in this send command is information about the relevant Symmetrix Transport Group (STG) to be used.

Please replace the paragraph beginning on page 22, line 7 with the following amended paragraph:

When the STPsocket call is issued at step 162, it is going to be bound to a dynamically allocated port. At step 162 the socket is bound to the dynamically allocated port. A STPlisten

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command is issued at step ~~164~~ ~~166~~. At step ~~166~~ ~~168~~, the STPgetsockname command is issued in order to obtain the details about the socket. Once the command at step 168 is issued, the information containing the value of the dynamically allocated port is sent back to the server process at step 170. The server process receives this information at step 140 and then establishes a socket beginning at step 142 to begin to establish a connection through the data storage system. Once the socket is created at step 142 with the STPsocket command, it is once again bound, to the dynamically allocated port at step 144.

Please replace the paragraph beginning on page 24, line 8 with the following amended paragraph:

Since the server process has the information about the dynamically allocated port, the server process is ready to open up a socket for that dynamically allocated port. The socket is opened at step 228 and bound at step 230. The server process indicates its readiness for connection on the dynamically allocated port at step 234. The client process indicates its acceptance of the socket created at step 228 at step 198 through an accept command. As the server process becomes aware that the client process has accepted the socket on a dynamically allocated port, it sends, at step 236, a message identifying the STG group to be used. This information is received by the server process at step 200. It should be understood that the socket created on the WKP is really not being used for anything, its purpose is really just to initiate the steps necessary to establish the connection on the dynamically allocated port, which as will be seen, is really used to establish the connection through the data storage system.

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